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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/585,329	06/02/2000	Martin Hollis	723-749	7163

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EXAMINER

GOOD JOHNSON, MOTILEWA

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/585,329

Applicant(s)

HOLLIS ET AL.

Examiner

Motilewa A. Good-Johnson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-14 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-14 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to the following communications: Application, filed 06/02/2000; IDS, paper #4, filed 02/13/2001; IDS, paper #5, filed 09/05/2001; IDS, paper #6, filed 06/06/2001; Amendment A, filed 03/24/2003.
2. Claims 1, 2, 5-14 and 16-22 are pending in this application. Claims 3, 4, 15 and 23 have been canceled. Claims 1, 5, 8, 14 and 18 have been amended.
3. The present title of the application is "Variable Bit Field Encoding" (as originally filed).

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/29/2004 has been entered.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 5-14 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dye, U.S. Patent Number 5,909,219, "Embedding a Transparency Enable Bit as Part of a Resizing Bit Block Transfer Operation", class 345/582, 06/01/1999, in view of Duluk, U.S. Patent Number 6,614,444 B1, 09/02/2003, filed 08/20/1999.

As per independent claim 1, an instance of a stored data element format having a predetermined bit count, the instance representing a portion of an image . . . comprising: a multi-bit alpha component field that may or may not be present in the particular instance of said format; (Dye discloses a transparency bit, i.e. alpha bit component, given in a pixel format, col. 8, lines 1-7) and a portion setting forth at least one RGB color component, said portion having a first length if said multi-bit alpha component field is present and having a second length greater than said first length if said multi-bit alpha component field is not present, (Dye discloses resize operation for shrink/stretch of the pixel format to resize the bit positions or information encoded dependent upon the desired operation, col. 7, lines 52-67) wherein the RGB color component portion uses the bit count otherwise available for the multi-bit alpha component to provide increased color resolution when the multi-bit alpha component is not present. (Dye discloses modifying as desired bit resize operation for RGB output

signals in which the RGB are resized to provide range signals from the pixel format to the desired pixel format, col. 7, lines 52-67)

However, it is noted that Dye fails to disclose a multi-alpha bit component per se.

Duluk discloses pixel formats including multi-alpha bit formats and bit positioning, col. 19, lines 30-38.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include multi-bit transparency as a pixel format for resize operations, to utilize the bit information already provided for increased resolution.

With respect to dependent claim 2, further including a flag that indicates whether said multi-bit alpha component field is present in a particular instance of said format. (Dye discloses a transparency enable signal that provides the transparency enable bit in the pixel register, col. 10, lines 27-28)

As per independent claim 5, a computer graphics system including a storage device storing plural data elements corresponding to color image elements, said data elements each setting forth RGB color information and an indicator field indicating whether or not . . . multi-bit field encoding semi-transparency . . . (Dye discloses modifying as desired bit resize operation for RGB output signals in which the RGB are resized to provide range signals from the pixel format to the desired pixel format with registers to store the pixel bits, col. 7, lines 52-67 and col. 9)

With respect to dependent claim 6, indicator field comprises a single bit flag. (Dye discloses a transparency enable signal that provides the transparency enable bit in the pixel register, col. 10, lines 27-28)

With respect to dependent claim 7, ones of said plural data elements that do not encode semi-transparency use the space . . . to encode said color information at higher resolution. (Dye discloses the RGB signals are given based upon the resize engine for the range of the color values to either shrink or enlarge the bits, col. 9, lines 1-67)

With respect to dependent claim 8, color information encodes each of the three primary colors red, green and blue with the same precision. (Dye discloses each color values is received by the comparator to the resize engine to provide a range for 6the color values and store the logic in the register, col. 9, lines 1-57)

With respect to dependent claim 9, data element has a 16-bit length, and said indicator field comprises a single bit. (Dye discloses a 16-bit format with a single transparency bit, col. 8, lines 5-8)

With respect to dependent claim 10, multi-bit field consists of three bits. (Dye discloses image resizing BitBLT operations with an embedded transparency enabled bit as part of the destination, col. 3, lines 11-12)

With respect to dependent claim 11, a data converter coupled to said storage device, said data converter converting between said multi-bit semi-transparency encoding and higher resolution alpha information. (Dye discloses color converter logic part of the resize engine, col. 6, lines 61-67)

With respect to dependent claims 12 and 13, data converter quantizes or dequantizes said higher resolution alpha information in equal steps; eight equal steps. (Dye discloses a converter as part of the resize engine performs either a stretch or

shrink operation and further provide the steps for determining the resulting pixel bit
resize, col. 7, lines 19-44)

As per independent claim 14, a color image element encoding format comprising:
an indicator field indicating whether . . . said format is capable of encoding semi-
transparency; (Dye discloses pixel formats including a format encoded by bits with a
transparency bit, col. 8, lines 1-13) and at least one variable sized field encoding further
information concerning said color image element . . . having a first length if said
indicator field indicates said format . . . is incapable . . . and a second length . . . if said
indicator field . . . is capable . . . (Dye discloses resize the configuration of the line
control for a modified bit positions or information encoded, col. 7, lines 49-67)

With respect to dependent claim 16, format includes a multi-bit alpha field if said
indicator field indicates said format instance is capable . . . (Dye discloses the line
control defining interpolation, the pixel format, including the presence of a transparency
bit and whether the resize engine if enabled, col. 8, lines 1-13)

With respect to dependent claim 17, color image element encoding format
encodes texels. (Dye discloses providing other operations on the resized pixel such as
texture mapping values, col. 11, lines 25-40)

As per independent claim 18, it is rejected based upon similar rational as above
independent claim 14.

With respect to dependent claim 19, image element comprises a texel. (Dye
discloses providing other operations on the resized pixel such as texture mapping
values, col. 11, lines 25-40)

With respect to dependent claim 20, step (c) comprises encoding color of said image element at higher resolution through use of said plural bits. (Dye discloses a converter and part of the resize engine performs either a stretch or shrink operation and further provide the steps for determining the resulting pixel bit resize, col. 7, lines 19-44)

As per independent claim 21, an alpha component converter that converts between first and second resolutions of semi-transparency information . . . quantizing or dequantizing first resolution semi-transparency information into a predetermined number of equal sized steps . . . (Dye discloses a converter and part of the resize engine performs either a stretch or shrink operation and further provide the steps for determining the resulting pixel bit resize, col. 7, lines 19-44)

With respect to dependent claim 22, the number of equal sized steps is eight. (Dye discloses a converter and part of the resize engine performs either a stretch or shrink operation and further provide the steps for determining the resulting pixel bit resize, col. 7, lines 19-44)

Response to Arguments

7. Applicant's arguments with respect to claims 1, 2, 5-14, and 16-22 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is

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(703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

A handwritten signature in black ink, appearing to read "Motilewa A. Good-Johnson". The signature is written in a cursive, flowing style.

Motilewa A. Good-Johnson
Examiner
Art Unit 2672

mgj
April 19, 2004